

Nevada Forest Health Highlights

2011



The Forest Resource

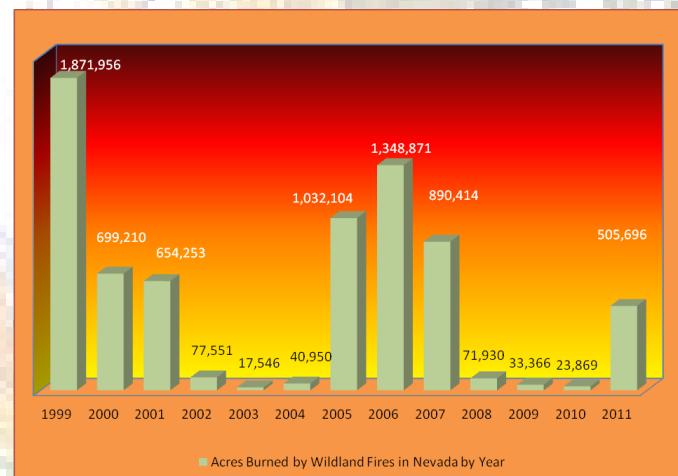
Nevada is unique in its forested component among the western states. The state is characterized by some 300 forested mountain "islands" separated by wide non-forested basins. Eighty-six percent of the state is non-

forest and about 83 % of the land is federally owned. Though the area of forest land is relatively small, the value of this resource is immeasurable in terms of commodities, recreational uses, and aesthetic properties. Healthy wildland and urban forests provide multiple benefits for Nevada's diverse population. Although little of Nevada's 11.1* million acres of forestland produces commercial timber, it does provide other wood products, watershed protection, wildlife habitat and recreation opportunities. Together with the urban forests in the state's communities, Nevada's forests are a critical resource in this sparsely forested state.

The majority of the forested lands are publicly owned (92%). Approximately 866,989 acres of forest land are in state and private ownership (using SWRegap data with the BLM 2007 land status layer data). From a statewide perspective, the majority (76%) of Nevada's forests are composed of pinyon and/or juniper species. Other forest types are restricted to the riparian areas and higher elevations in the state's 314 mountain ranges. Detailed information is available from the [Interior West FIA](#).

Components of Change

Nevada's forests are host to several common pests which plague Western forests. Widespread stress to the trees - brought on by drought conditions - weaken individual trees creating favorable conditions for the pests. **Wildfire** is a major change component for Nevada's forest and rangelands. The year 2011 was a high acreage wildfire year with 811 fires of nearly 505,700 acres consumed compared to 23,869 acres in 2010.



Forest Health Issues

In 2011, most the estimates of mortality caused by insect outbreaks remained the same or decreased significantly from 2010 levels mostly attributed to improved growing season moisture conditions. The exceptions were increases in the total number of acres affected by subalpine fir complex, fir engraver beetle, Douglas fir tussock moth on subalpine fir, and forest tent caterpillar on aspen. **Pinyon needle scale** decreased nearly 50% in 2011 with a total of about 637,089 acres. **Other defoliating agents** decreased with pinyon sawfly acreage decreasing over 50% to

13,240 from 27,245 acres in 2010. **Mountain mahogany defoliation** decreased to 5,256 acres from 46,572 acres in 2010. The only defoliating agent that increased was forest tent caterpillar on aspen which increased to 4,184 acres from 3,248 acres in 2010. **Mortality agents that decreased included:** **Pinyon ips**, decreased 47% of 2010 figures in 2011 with approximately 1,422 trees being affected. **Mountain pine beetle (MPB)** mortality on all white pines was 60% of 2010's 17,689 trees. In 2011, 10,986 white pine trees were killed.



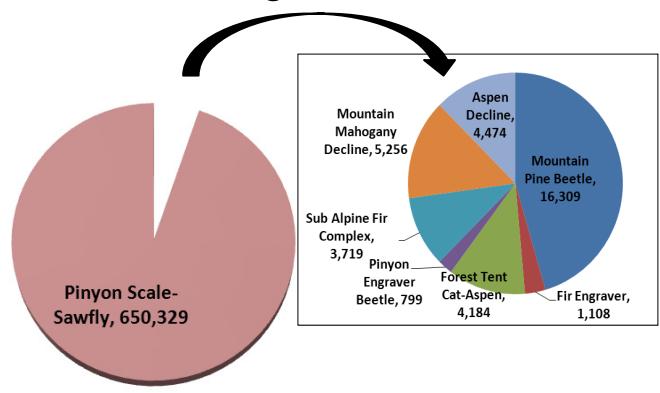
Extensive pinyon needle scale defoliation on lower fan of the Pinenut Mountains, W. NV

Lady bugs, pinyon scales natural enemy, are starting to make a difference in keeping the populations down on the larger trees. Below are cast off larvae shells and emerged lady bug.

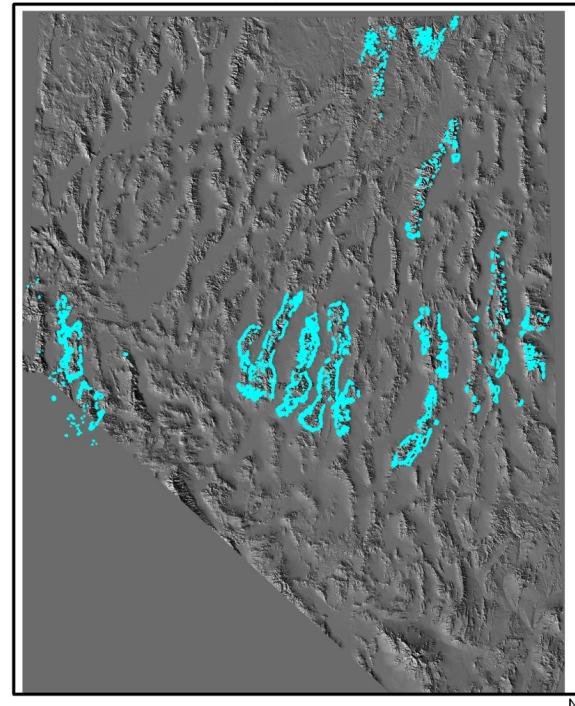


The following chart provides data on the main insect and disease agents causing damage to Nevada's forests based on observations from the air in 2011. These numbers are underestimates for the year because of limited aerial observations in some parts of the state. Comparisons with other year's data can not be done directly because of this limitation.

2011 Principal Damaging Agents, Showing Acres Affected



2011 Nevada Aerial Detection Survey Damage Areas



In 2010, the USFS provided grant funding to the Nevada Division of Forestry to develop an education and implementation program to the citizens of Nevada on identifying the invasive bark beetles that they may encounter in their urban environments. This was sub-contracted to the University of Nevada Cooperative Extension. Eight citizen monitoring trainings have been completed to date. Educational banners have been developed as shown on next page:

CITIZEN MONITORING FOR URBAN FOREST HEALTH

Tree Invaders ... They're BAD!

IF YOU HAVE A TREE IN YOUR YARD,
YOU ARE PART OF THE URBAN FOREST.

WHY WORRY?

TREE INVADERS...

- ✓ Reduce property values
- ✓ Destroy shade
- ✓ Kill trees, causing a fire hazard
- ✓ Create heat islands
- ✓ Ruin curb appeal
- ✓ Cause hazards when dying and dead trees break or fall
- ✓ Destroy the beauty of your landscape

HOW TO BE A CITIZEN MONITOR:

Watch out for these
invaders



SIREX WOOD WASP

Photo by Greg Johnson, USDA Forest Service

Brownwood.org



OAK SPLENDOUR BEETLE

Photo by Arctic Forest Institute & Pacific Northwest

Brownwood.org



GOLD SPOTTED OAK BORER

Photo by Mike Lavel, Denver Botanic Gardens

Brownwood.org



ASIAN LONGHORNED BEETLE

Photo by USDA Forest Service

Brownwood.org



EMERALD ASH BORER

Photo by Brian Cappa, Michigan State University

Brownwood.org

WHAT CAN YOU DO?

- ✓ Don't move firewood
- ✓ Be extra eyes on the lookout for invasive insects
- ✓ Be aware of which trees could be victims



University of Nevada
Cooperative Extension



U.S. FOREST SERVICE



NEVADA
DIVISION OF FORESTRY

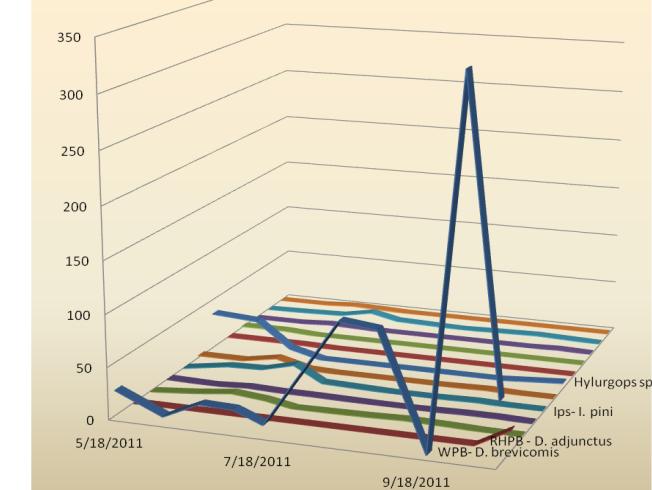


Nevada Department of
AGRICULTURE

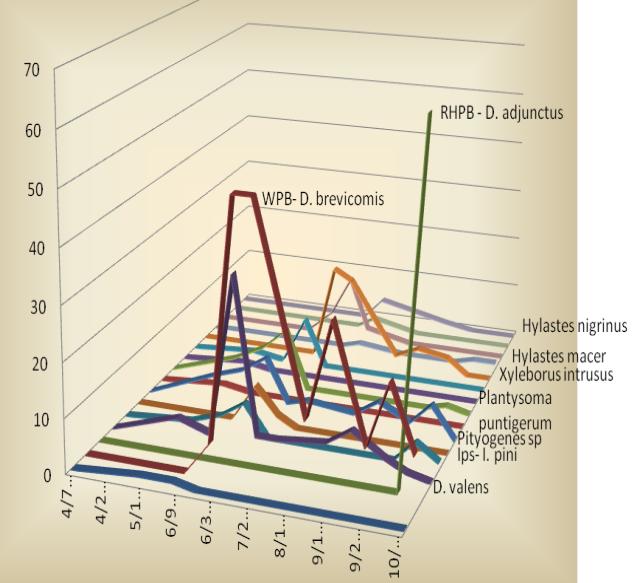
In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, disability, age, or reprisal or retaliation for previous civil rights activity. (Not all prohibited bases apply to all programs.) Title VI, Title VII, Title IX, Section 504, and Title II. U.S. Office for Civil Rights, U.S. Department of Education, 400 Maryland Avenue, SW, Washington, D.C. 20460-0001 or call (800) 421-3602 (TDD/Text Telephone) or (800) 368-3602 (Voice). USDA is an equal opportunity provider and employer.

In the spring of 2011, NDF in coordination with Nevada Department of Agriculture's (NDOA) State Entomologist installed a series of 4 traps in 3 canyons in the Spring Mountains in Southern Nevada. The traps showed that the main mortality agent acting on the ponderosa pines (PP) in 2011 was western pine beetle (WPB). In Kyle Canyon, WPB peaked in mid August and early October and then crashed about the time round headed pine beetle (RHPB) started picking up.

Kyle Canyon Trap Catches 2011

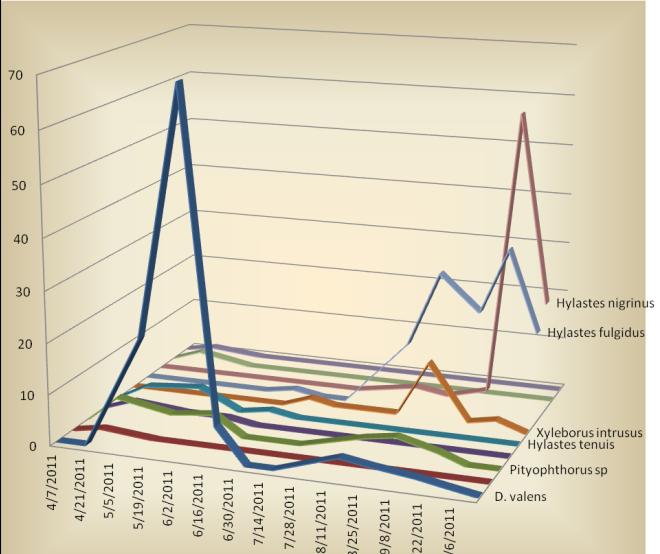


Lee Canyon Trap Catches 2011



Lee Canyon of the Spring Mt. PP area traps showing the WPB - *D. brevicomis* peaking earlier in early July & September in addition to red turpentine beetle and *Xyleborus intrusus* spikes throughout the summer and an October spike of RHPB - *D. adjunctus* again about the time the WPB crashes.

Spring Mountains Pinyon-Juniper Trap Catches 2011



Pinyon pine traps showing the early dominance of red turpentine beetle, *D. valens*, with two species of *Hylastes* dominating in the fall in Spring Mts S. NV. Only one pinyon engraver beetle was capture early in the season.

For More Information:

[Forest Health Protection](#)
Ogden Field Office
USDA Forest Service
4746 S. 1900 E.
Ogden, UT 84403



[Interior West Forest Inventory & Analysis](#)
USDA Forest Service
507 25th St
Ogden, UT 84401

[Nevada Division of Forestry](#)
2478 Fairview Dr
Carson City, NV 89701

